Hemodialysis Knowledge
and Medical Adherence in
African Americans
Diagnosed with End Stage
Renal Disease

Presented
By
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Background
• Fifty percent of those with chronic diseases do not adhere to the treatment regimen.
• It is an increasing problem worldwide
• Many individuals diagnosed with end stage renal disease (ESRD) do not adhere to prescribed treatment regimen
• Kidney disease is the 9th leading cause of death in the United States

(UNA, 2008)

Incidence
• The highest incidence of ESRD is in the south and southeastern region of the United States
• Rates among AA’s are nearly 3 times higher than Caucasians
• Mortality rates of AA’s diagnosed with ESRD age 65 and older are 7 times greater than others using Medicare

(United States Renal Data System [USRDS], 2008)

Literature Review
• Kugler et al. (2005) conducted a cross-sectional design study to describe the prevalence of nonadherence with the prescribed diet and fluid restrictions among patients receiving hemodialysis.
• 81.6% were non-adherent with their diet.
• 74.9% were non-adherent with their fluid intake.
• These results indicate that there is a problem with adherence to dietary and fluid recommendations.

Problem Statement
• In the United States, ESRD and adherence to prescribed treatment regimen is an increasing and challenging problem.
• Due to the disproportionately high rates of ESRD in AA’s, non-adherence has become more prevalent among them.
• Various complex and interrelated factors influence adherence.

Literature Review
• The effectiveness of a patient education program on fluid compliance (adherence) was conducted by Barnett et al. (2007).
• An exploratory study of 26 non-compliant (non-adherent) patients using a quasi-experimental research design revealed that patients mean interdialytic weight gain decreased and adherence to fluid restrictions increased following an education intervention.
Purpose

- To explore the relationship between hemodialysis knowledge and medical adherence to prescribed treatment regimen in AA’s diagnosed with ESRD.
- To determine if an education intervention improved hemodialysis knowledge and medical adherence.

Significance

- Findings from this study may assist healthcare professionals to target interventions that are race specific that will increase adherence rates.
- These interventions can potentially improve the overall adherence levels and improve health outcomes of individual’s who require maintenance hemodialysis.

Major Constructs

- Independent Variable
  - Hemodialysis Knowledge
    . Cognitive information about kidney disease and the benefits of hemodialysis treatment regimen

- Dependent Variable
  - Medical Adherence
    - Extent to which a person’s behavior
      - taking medication
      - following diet
      - executing lifestyle changes correspond with agreed recommendations from a health-care provider

Research Hypotheses

- H₁: There is a positive relationship between hemodialysis knowledge and medical adherence.
- H₂: There is a significant difference in hemodialysis knowledge after an education intervention.
- H₃: There is a significant difference in medical adherence after an education intervention.

Theoretical Framework

- Theory of Goal Attainment
- Imogene King
  - transactions between the person and environment (nurse) must occur in order for a goal to be attained
Methodology

- Study Design
  - Quasi-experimental
  - Exploratory
- Sample
  - Non-probability convenience sample
  - 85 participants

Inclusion Criteria

- Must be an AA
- At least 18 years of age
- On hemodialysis for at least 1 year
- Clinically diagnosed with ESRD
- Able to speak, write, read and understand English language
- Oriented to person, place and time
- Able to read and sign consent
- Able to successfully complete all research instruments and surveys

Setting/Human Subjects Protection

- Three hemodialysis centers in southeastern Louisiana
- Institutional Review Board (IRB) approval
- Approval from data collection sites
- Written consent obtained

Measurements

- The Life Options Hemodialysis Knowledge Test
  - Measures hemodialysis knowledge
  - Higher scores associated with greater knowledge
  - Content validity established by panel of experts
  - Cronbach alpha is 0.76
  - Reading level 7.4

- The Medical Outcomes Study (MOS) General Measure of Patient Adherence
  - Measures general patient adherence to treatment regimen
  - Higher scores associated with adherence
  - Internal consistency reliability alpha 0.81
  - Reading level 4.7
Measurements

• Demographic Questionnaire
  – Measures age, sex, education, marital status, number of years on hemodialysis and other co-morbid conditions

Educational Intervention

• One 1 on 1 teaching session lasted 30 minutes
• Primary caregivers were encouraged to attend

Data Analysis

• Pearson Product-Moment Correlation Coefficient (r)
• Paired sample t-test

Demographic Characteristics

• Age 52.5
• 47.1% were males, 52.9% were females
• Marital Status – 41.2% were single, 25.9% were married
• Education
  - 44.7% did not complete high school
  - 55.3% completed high school

Demographic Characteristics

• Health Information
  - 65.9% reported hemodialysis 1 to 5 years
  - 27.1% reported hemodialysis 6 to 10 years
• Co-morbid Conditions
  - 89.4% reported HTN
  - 42.4% reported DM

Study Findings
H1: There is a positive relationship between hemodialysis knowledge and medical adherence

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H2: There is a significant difference in hemodialysis knowledge after an education intervention

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H3: There is a significant difference in medical adherence after an education intervention

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Discussion/Conclusions

- No significant relationship was found between hemodialysis knowledge and medical adherence
- The mean scores of the hemodialysis knowledge posttest were significantly greater than the mean scores of the hemodialysis knowledge pretest
- The mean scores of the medical adherence pretest and posttest were not statistically significant

Implications

- Nursing research
- Nursing practice
- Health policy

Limitations

- Sampling technique
- Self report measures
- Difficulty understanding research tools
Recommendations

- Further research designed to develop research instruments that are culturally specific
- Further research designed to compare adherence by race
- Further research to develop culturally specific interventions that focus on increasing knowledge and medical adherence

Thank You

QUESTIONS?